

Application Serial No.: 09/862,418  
Applicant(s): Chang et al.

Docket No.: N.C. 79,764

### REMARKS

Reconsideration of the above-identified application is respectfully requested. Claims 1-17 and 19-31 remain in this application. Claims 21-31 are withdrawn as being drawn to a non-elected invention. Claim 18 is canceled. Claims 1, 7, 9, 12, 15, and 17 have been amended to more particularly point out and distinctly claim the subject matter that Applicants regard as their invention.

I. Claim Rejections – 35 U.S.C. § 112, second paragraph

Claims 1-20 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner stated that in claim 1, phosphate was omitted from line 2 and that in line 6 “chelators” would be better phrased –chelated metal ions–. Applicants have amended claim 1 to add “phosphate” to line 2. Applicants disagree with the Examiner’s statement that “chelators” should be changed to –chelated metal ions–. The ion is immobilized by the chelator, and the chelator is immobilized by the support. Therefore, using the term “chelators” is a more accurate description than –chelated metal ions–.

With regard to claim 7, the Examiner suggested changing “catalytically active metal” to –chelated metal ion– and changing “metal chelate” to –catalytically active–. Applicants have amended claim 7 to change “catalytically active metal contained in the immobilized metal chelate complex” to –catalytically active chelated metal ion contained in the immobilized metal chelate complex–. Applicants assert that this is a more accurate description.

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With regard to claim 9, " a support" was deleted from line 2, as suggested by the Examiner.

Applicants amended claim 12 to ensure that the phosphorus groups in line 2 match those in the last line, as recommended by the Examiner.

With regard to claim 15, the word "and" was deleted in line 5 and the phrase "one of the monomer or" was deleted in line 8.

Claim 18 has been canceled.

Based on the above, Applicants respectfully submit, that the § 112 rejections have been overcome.

II. Claim Rejections – 35 U.S.C. § 103(a) – Gustafson, Courtney, Wagner-Jauregg, & Gryaznov

Claims 1-4 and 7-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over any of Gustafson et al., J. Am. Chem. Soc., vol. 85, pp. 598-601 (1963) (Gustafson); Courtney et al., J. Am. Chem. Soc., vol. 79, pp. 3030-3036 (1957) (Courtney); or Wagner-Jauregg et al., J. Am. Chem. Soc., vol. 77, pp. 922-929 (1955) (Wagner-Jauregg), in view of U.S. Patent 4,394,294 to Gryaznov (Gryaznov).

Applicants respectfully submit that claims 1-4 and 7-11 are not obvious over Gustafson, Courtney, or Wagner-Jauregg in view of Gryaznov. To establish a prima facie case of obviousness, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981 (C.C.P.A. 1979); M.P.E.P. 2143.03. Additionally, "[t]here must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of

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the invention would make the combination.” *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992).

The Examiner relies on Gryaznov for the general teaching that in catalysis, it is conventional to support the active metal on a solid polymeric support. In Gryaznov, a polyorganosiloxane polymer is used, which is a different class of polymers than what is used in the present invention. In the present invention, the support is highly porous with high surface areas. There are many classes of polymers, and not all polymers have the same properties. The fact that one particular polymer worked as a support in Gryzanov does not make it obvious to one of ordinary skill in the art to apply the teaching of Gryzanov to that of Gustafson, Courtney, or Wagner-Jauregg. Without disclosing the same class of polymers, there is no motivation to combine the references and no likelihood that another type of polymer would have the desired effect. Therefore, Applicants respectfully submit that claims 1-4 and 7-11 are not obvious over the combination of references.

III. Claim Rejections – 35 U.S.C. § 103(a) – Gustafson, Courtney, Wagner-Jauregg, Gryaznov, & Singh

Claims 1-4, and 7-11, 15-1,6 and 18-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over any of Gustafson, Courtney, Wagner-Jauregg, and Gryaznov as applied to claims 1-4 and 7-11 above, and further in view of Singh et al., Mat. Res. Soc. Symp. Proc., vol. 501, pp. 199-207 (1998) (Singh).

The Examiner relies on Singh for the teaching that preorganized polymer matrices that bind metal ions selectively are conventional in the art. The only claim in the present application that has preorganized polymer matrices is claim 18, which has been canceled. Self-organized

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polymolecular associations are not the same as preorganized. Singh is not relevant to any of the other claims. For this reason, in addition to the reasons given above regarding the rejection of claims 1-4 and 7-11, applicants respectfully submit that claims 1-4, and 7-11, 15-1,6 and 19-20 are not obvious over the combined references.

IV. Claim Rejections – 35 U.S.C. § 103(a) – Gustafson, Courtney, Wagner-Jauregg, Gryaznov, Singh, & Giletto

Claims 1-11 and 15-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Singh, Gustafson, Courtney, Wagner-Jauregg, and Gryaznov as applied to claims 1-4, 7-11, 15-16, and 18-20 above, and further in view of U.S. Patent 6,569,353 to Giletto (Giletto).

Applicants respectfully submit that claims 1-11, 15-17, and 19-20 are not obvious over the combined references. Giletto is not used for hydrolysis, and the adsorbent used is passive. Thus, Giletto does not disclose a support “capable of adsorbing compounds in a manner that enhances catalysis” as recited in amended claim 17. For this reason, in addition to the reasons given above regarding the rejection of claims 1-4, 7-11, 15-16, and 18-20, applicants respectfully submit that claims 1-11, 15-17, and 19-20 are not obvious over the combined references.

V. Claim Rejections – 35 U.S.C. § 103(a) – Gustafson, Courtney, Wagner-Jauregg, Gryaznov, Singh, Giletto, Hlatky, & Soga

Claims 1-4 and 7-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gustafson, Courtney, Wagner-Jauregg, and Gryaznov as applied to claims 1-4 and 7-11 above, and further in view of either U.S. Patent 6,040,261 to Hlatky (Hlatky), or U.S. Patent 5,610,115 to Soga (Soga).

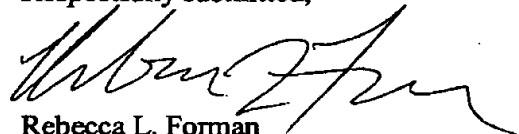
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The Examiner relies on Hlatky and Soga for the general teaching that "polymeric composition may be made by first making the substrate, adding the ligand which bonds to the metal, then adding a metal compound whose metal atom then binds to the support-bonded ligand." Since Applicants do not claim this reaction scheme identified by the Examiner, Applicants do not understand the relevance of these references in the rejection. However, because of the reasons given above regarding the rejection of claims 1-4 and 7-11, 15-16, and 18-20, applicants respectfully submit that claims 1-4 and 7-11 are not obvious over the combined references.

In view of the foregoing, it is respectfully submitted that this application is ready for allowance. Applicants respectfully request that a timely Notice of Allowance be issued in this case. Kindly charge any additional fees due, or credit overpayment of fees, to Deposit Account No. 50-0281.

Respectfully submitted,

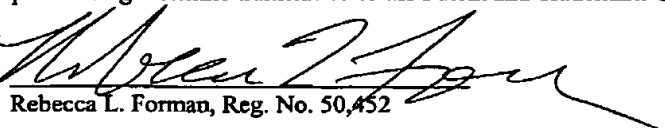


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